
Subject: Widget Event_Pro question

Posted by [Spon](#) on Mon, 31 Mar 2008 11:29:56 GMT

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Hi guys,

As part of a little image display programme, I've currently got a draw widget:

```
Display = WIDGET_DRAW(Base, XSIZE = S[0], YSIZE = S[1], $  
    /MOTION_EVENTS, EVENT_PRO = 'SLIDESHOWWIDGET_GETVALUES')
```

And I'd like to add button events to it. I don't want to get rid of the motion events though. The easiest way that I can think of adding functionality is to (ideally) have two Event_Pro strings, one to be run if a motion event is detected, another if a mouse click is detected. The two are going to do fairly different things here. (If you're interested: the motion event will just update 3 labels within the widget base to show x & y position and image intensity at that point; whereas the click should start up a second, blocking widget that's going to draw me a graph of image intensity change over time at that point.)

Is there a way of doing this?

...perhaps by calling to widget_draw or even widget_control a second time and defining a different Event_Pro? Can I even just superimpose a second draw widget over the whole thing and give it its own event_pro? I'd suspect that this latter approach would give it (my 2nd draw widget) a different Window Index and mess things up royally at the user interface :-)

Or am I just stuck making my SLIDESHOWWIDGET_GETVALUES programme big, confusing and unwieldy?

Regards,
Chris

Subject: Re: Widget Event_Pro question

Posted by [David Fanning](#) on Wed, 02 Apr 2008 15:23:49 GMT

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Spon writes:

- > I need to define this array before any instances of widget B are open.
- > Can I use a value of [-1L] for this? Or is -1 a valid widget ID number
- > that might cause problems later if IDL decides to label one of my
- > widgets -1 at some point?

All widget IDs are positive. But, a pointer comes to mind, too. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Widget Event_Pro question
Posted by [Spon](#) on Wed, 02 Apr 2008 15:38:16 GMT
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On Apr 2, 4:23 pm, David Fanning <n...@dfanning.com> wrote:

```
> Spon writes:
>> I need to define this array before any instances of widget B are open.
>> Can I use a value of [-1L] for this? Or is -1 a valid widget ID number
>> that might cause problems later if IDL decides to label one of my
>> widgets -1 at some point?
>
> All widget IDs are positive. But, a pointer comes
> to mind, too. :-)
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming (www.dfanning.com)
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
```

I think I'm already doing what you suggest, but just to be sure:

```
Graphs = PTR_NEW([-1L])
UVal = {Img:Img $
        ... ;
        ... ; Loads of other garbage
        Graphs:Graphs }
WIDGET_CONTROL, Base, SET_UVALUE = UVal
```

And then, when I realize a graph widget:
; Register the widget with top level UVal structure

```
*UVal.Graphs = [(*UVal.Graphs), GraphBase]
WIDGET_CONTROL, Event.Top, SET_UVAL = UVal

; Register top level widget ID in Graph widget UVAL
GraphUVal = { GroupLeader:Event.Top }
WIDGET_CONTROL, GraphBase, SET_UVAL = GraphUVal
```

Is this what you meant by using a pointer? Or could I do it more efficiently? The main problem this creates is in my graph deleting procedure, where I have to first check if the array contains any non-minus-one entries and then loop through them all, destroying the associated widgets and resetting them to -1.

Oh, and another question while I'm at it: I'm trying to check if a widget still exists before trying to load its UVal, I thought that

```
IF WIDGET_INFO(GraphUVal.GroupLeader, /ACTIVE) THEN BEGIN
```

would do what I want, but apparently the /ACTIVE keyword doesn't work with an argument.

Chris

Subject: Re: Widget Event_Pro question
Posted by [David Fanning](#) on Wed, 02 Apr 2008 15:47:39 GMT
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Spon writes:

```
> I think I'm already doing what you suggest, but just to be sure:
>
> Graphs = PTR_NEW([-1L])
```

I wouldn't do this. If there is nothing in it, I would probably make it a null pointer:

```
graphs = PTR_NEW()
```

Then check to see if I had a valid pointer in my code before I used it.

Or, if you **want** a valid pointer, but don't have anything to put in it, you can just do this:

```
graphs = Ptr_New(/ALLOCATE_HEAP)
```

Now, you have a valid pointer:

```
IDL> Print, Ptr_Valid(graphs)
1
```

But, the thing inside it is an undefined variable:

```
IDL> help, *graphs
<PtrHeapVar1> UNDEFINED = <Undefined>
```

You can stick something in it:

```
*graphs = [widgetID]
```

You can even find out how many things are in it:

```
IDL> Print, N_Elements(*graphs)
```

```
> Oh, and another question while I'm at it: I'm trying to check if a
> widget still exists before trying to load its UVal, I thought that
>
> IF WIDGET_INFO(GraphUVal.GroupLeader, /ACTIVE) THEN BEGIN
>
> would do what I want, but apparently the /ACTIVE keyword doesn't work
> with an argument.
```

I don't know what ACTIVE does. The keyword you want is VALID_ID.

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Widget Event_Pro question
Posted by [Spon](#) on Wed, 02 Apr 2008 16:10:28 GMT
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On Apr 2, 4:47 pm, David Fanning <n...@dfanning.com> wrote:
> Spon writes:
>> I think I'm already doing what you suggest, but just to be sure:
>
>> Graphs = PTR_NEW([-1L])
>

```

> I wouldn't do this. If there is nothing in it, I would
> probably make it a null pointer:
>
>   graphs = PTR_NEW()
>
> Then check to see if I had a valid pointer in my code
> before I used it.
>
> Or, if you *want* a valid pointer, but don't have anything
> to put in it, you can just do this:
>
>   graphs = Ptr_New(/ALLOCATE_HEAP)
>
> Now, you have a valid pointer:
>
>   IDL> Print, Ptr_Valid(graphs)
>       1
>
> But, the thing inside it is an undefined variable:
>
>   IDL> help, *graphs
>   <PtrHeapVar1>  UNDEFINED = <Undefined>
>
> You can stick something in it:
>
>   *graphs = [widgetID]
>
> You can even find out how many things are in it:
>
>   IDL> Print, N_Elements(*graphs)
>
>> Oh, and another question while I'm at it: I'm trying to check if a
>> widget still exists before trying to load its UVal, I thought that
>
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> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.

```

- > Coyote's Guide to IDL Programming (www.dfanning.com)
- > Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thanks David, you're a great help as usual :-)

Chris
